NEW LAND SNAILS COLLECTED BY THE FERRISS AND HINKLEY EXPEDITION OF 1919.

BY H. A. PILSBRY AND JAS. H. FERRISS.

Sonorella montana. Resembling *S. walkeri* in form. Umbilicus one-eighth to one-tenth the diameter. Embryonic whorls densely granulose with rather sparse protractive threads, the next whorl indistinctly granose, later whorls very smooth. Aperture large, the outer margin expanded, basal somewhat reflected. Anatomically it is distinguished by the extremely short and slender penis, smaller than in any other species examined. Montana Peak, near the Montana mine, not far from Oro Blanco, and Bear canyon, further southeast, Pajarito range.

Alt. 14, diam. 23.7, umbilicus 3 mm.; $4\frac{3}{4}$ whorls.

Alt. 16.3, diam. 25.5, umbilicus 2.6 mm.; 5 whorls.

Sonorella hinkleyi, n. sp. The shell is small, depressed, solid, umbilicus about one-sixth the diameter. Embryonic shell radially rugose with sparse, irregular divaricating threads, later whorls slightly striate. Peristome very little expanded. A dark band is normally present, but at Station 244 albinos were found in abundance. Alt. 8.5, diam. 16 mm.; $4\frac{1}{4}$ whorls. Cayetano Mountains. Anatomically characterized by the long penis and vagina, the latter with a weakly marked muscular dilation. Papilla spirally plicate.

Sonorella cayetanensis, n. sp. Shell thin, light, the band pale-bordered above and below, umbilicus contained about 8 times in the diameter. Embryonic sculpture about as in *S. hinkleyi*, the later whorls polished, faintly striate. Peristome thin, little expanded. Alt. 11.7, diam. 21 mm.; $4\frac{3}{4}$ whorls. A thinner, larger, more capacious shell than *S. hinkleyi*, resembling it considerably in soft anatomy. Highest peaks of the Cayetano Mountains.

Sonorella tumacacori, n. sp. Except by its larger size, the shell is similar to *S. hinkleyi*. The genitalia differ by the larger node on the vagina, the more tapering penis-papilla and the very short penial retractor muscle. Alt. 10.4, diam. 17.8 mm.; $4\frac{1}{2}$ whorls. Stations 209, 210, in a large gulch draining the northeastern side of Tumacacori Peak.

Sonorella patagonica, n. sp. The shell is rather capacious with umbilicus about one-seventh the diameter, polished, rather solid, the band rather wide, pale-bordered on both sides, sculpture and form about as in *S. papagorum* P. & F. The vagina is swollen at base; penis-papilla large, tapering, conspicuously wrinkled transversely; flagellum distinct. Alt. 13, diam. 22 mm.; nearly 5 whorls. It is often larger. Mt. Washington, Patagonia Mts.

Bulimulus nigromontanus, n. subsp. Differs from *B. nigromontanus* by the narrower umbilicus, and is therefore temporarily separated as a subspecies. Pina Blanca in the Pajarito Mountains.

Sonorella mustang, n. sp. The shell is rather openly umbilicate, dilute cinnamon-buff with a pale-bordered dark band, glossy, nearly smooth, the embryonic shell coarsely, irregularly wrinkled with some irregular protractive threads. Last whorl descending rather deeply. Peristome expanded, the edge of parietal callus usually distinct. Alt. 15.3, diam. 26.5 mm.; 5 whorls. Mustang Range. Albinos were taken at Station 284.

Sonorella montezuma, n. sp. The shell is small, narrowly umbilicate, cinnamon, fading to nearly white on the base and on both sides of the chestnut-brown band. Embryonic whorls without protractive threads. Peristome slightly expanded. Alt. 9.4, diam. 15 mm.; 4½ whorls. Montezuma Canyon, Huachuca Mts. It is smaller than any known Huachucan species except *S. g. parva*, which inhabits the opposite end of the range.

Sonorella elizabethae, n. sp. Shell dilute cinnamon-buff fading on the base and on both sides of the *narrow* chestnut-brown band. Embryonic whorl having numerous, irregular portractive threads; later whorls microscopically lineolate-granulose. Aperture small, the peristome slightly expanded. Alt. 10.7, diam. 19.2, umbilicus 3.2 mm. Canillo Hills.

Sonorella cotis, n. sp. Shell dilute cinnamon-buff fading on base and on both sides of the chestnut-brown band. Embryonic whorls with weak protractive threads. Last whorl rather deeply descending in front. Peristome somewhat expanded, edge of the parietal callus distinct. Alt. 12.3, diam. 20, um-

bilicus 3.3 mm.; 4½ whorls. Whetstone Range. Most specimens taken this year are larger than the type lot, collected by Ferriss and Daniels in 1914.

Sonorella insignis, n. sp. The shell is much depressed, rather solid, openly umbilicate. Band is broad with pale borders. Surface roughened by low wave-like ribs in the direction of growth-lines, and microscopic incised lines. Aperture small. Peristome very little expanded, blunt. Alt. 9.8, diam. 20.5 mm.; 4½ whorls. Whetstone Range. One of the finest Sonorellas collected in 1919, recalling *S. dalli* by its depressed form.

MOLLUSCA OF FORRESTER ISLAND, ALASKA.

Univalves (Continued from page 69).

BY GEORGE WILLETT.

Tornatina carinata Gld. *Tornatina culcitella* Gld. *Cylichna alba* Brown. These three species were taken occasionally in the dredge, the latter being the most uncommon.

Dentalium pretiosum Nutt. Very plentiful in 10–40 fathoms.

Dentalium dalli Pils. A few young specimens secured in 50 fathoms.

Limacina pacifica Dall. Appeared swimming in the water in great numbers at times during calm weather. Extensively eaten by several species of fish.

Siphonaria thersites Cpr. Abundant in some localities, mostly in short moss growing on the rocks considerably above low tide line.

Crassispira perversa Garb. Dredged occasionally in 40–50 fathoms.

Crassispira rotula Dall. More plentiful than the last in about same depth.

Crassispira (*Suavodrillia*) sp.? A specimen dredged is now in National Museum. Stated by Dr. Dall to be undescribed.

Mangilia oldroydi Arnold. *Mangilia eriopis* Dall. *Mangilia crebricostata* Cpr. A very few specimens of each of these three species were taken in the dredge.